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| EXAMINER | |
|--------------|--------------|
| PARK, CHAN S | |
| ART UNIT | PAPER NUMBER |
| 2622 | |

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,782

Applicant(s)

HARPER, MARK A.

Examiner

CHAN S. PARK

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-22,28,30-33,35,36 and 38-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-22,28,30-33,35,36 and 38-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. 20050606
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment was received on 5/25/05, and has been entered and made of record. Currently, **claims 1, 3-22, 28, 30-33, 35, 36 and 38-43** are pending. Note that the examiner requested the applicant to resubmit a new copy of the amendment during the telephonic interview with Attorney Steven R. Ormiston (Reg. No. 35,974) on May 25, 2005. The copy was received on 5/25/05.

Specification

2. The corrected or substitute specification was received on 1/21/05. The specification is acceptable.

Response to Arguments

Applicant's arguments filed 5/25/05 have been fully considered but they are not persuasive.

3. In response to applicant's argument regarding the rejection of **currently amended claims 1, 13, 28 and 36**, the applicant explains how the current invention differs from the teaching of Owa et al. U.S. Patent No. 6,348,971 (hereinafter Owa). Particularly, the applicant states that the current invention has, for example, a converter configured to convert the first and second values into a common unit of measure. Upon review of the applicant's disclosure of the converter described in the original

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Specification filed on 3/29/01, the examiner finds no apparent differences from the teaching of Owa. The Specification recites:

Referring now to FIG. 3, the JAL 28 disposed in the computer 10 is coupled to the print driver 16 and may include a converter 42 for converting information received from the print driver 16 into a common unit system. The information may include, for example, a first set of values that represent the amount of resources required to print a document and a second set of values that represent the amount of resources available at either of the printers 18, 38. The converter 42 is further coupled to a comparator 44 that receives the converted information, i.e., the first and second sets of values, and then compares the sets of values. More particularly, the value from the first set representing a first required resource may be compared to the value from the second set that represents the amount of the first resource that is available. The comparator 44 is further coupled to an indication signal generator 46 that causes an alert message to be generated in the event the comparisons performed at the comparator 44 reveal the amount of resources available at the printer 18 or 38 are insufficient to print the document. The converter 42, comparator 44 and indication signal generator 46 are further coupled to and controlled by a controller 48. As will be understood by one having ordinary skill in the art, the converter 42, the comparator 44, the indication signal generator 46 and the controller 48 may be implemented using hardware, software, firmware or a combination thereof (page 6, lines 5-24).

This statement defines the conversion as a process for converting information, which contains whole sets of information, into one particular information/number for the comparison. The examiner believes the same conversion process takes place in the apparatus of Owa. Owa discloses an apparatus for receiving information which includes a first set of values that represent the amount of resources required to print a document (paper size, print resolution, number of pages in col. 4, lines 17-43) and a second set of values that represent the amount of resources available at a plurality printers (fig. 4), wherein particular converted sets of values, i.e., a number of A4 sheets remaining at a printer and a number of A4 sheets required for the print job, are compared (col. 7, lines 23-39). Since whole information shown in fig. 4 is *converted* for

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one particular comparison, it is concluded that there is no apparent difference in the applicant's converter and the teaching of Owa.

If other conversion different from the one presented above from the Specification should be considered, the examiner respectfully request the applicant to show the specific conversion from the Specification and amend the claims to clearly distinguish its difference from the conversion disclosed above.

Furthermore, referring to col. 8, lines 49-67, another conversion, which is different from the conversion presented above, is taught to meet the converter limitation of claim 1.

Therefore, the rejections of **claims 1, 13, 28 and 36**, as currently amended, as cited in the Office action dated 10/21/04, under 35 U.S.C. § 102(e), as being anticipated by Owa, is maintained and repeated in this Office action.

4. Applicant's arguments with respect to **claims 7, 33, 40 and 42** have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

5. Claim 7 is objected to because of the following informalities:

Line 7, "a printer" should be -- said printer --.

6. Claim 28 is objected to because of the following informalities:

Line 7, "value" should be -- values --;

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-6, 8-10, 13-17, 21-22, 28, 30-32, 36 and 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Owa et al. U.S. Patent No. 6,348,971 (hereinafter Owa).

7. With respect to claim 1, Owa discloses an apparatus (host computer 1 in fig. 2) for estimating printer resources, said apparatus comprising:

a comparator (output destination printer selection section 11) configured and adapted to receive first and second values, said comparator further being adapted to compare (col. 5, lines 1-25; col. 5, lines 41-44; and col. 7, lines 35-39) said first value to said second value and to generate an output signal based on said comparison, wherein said first value represents a quantity of a printer resource needed to print a document (paper size, print resolution, number of pages in col. 4, lines 17-43) and further wherein said second value represents an amount of said printer resource available at a printer (fig. 4); and

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a controller coupled to said comparator, said controller being configured and adapted to control said comparator and to generate a control signal based on said comparison (col. 5, lines 8-9);

a converter coupled to said comparator and being coupled to and controlled by said controller, said converter being configured to receive said first and said second values, and said converter further being configured to convert said first and said second values into a common unit of measure (col. 7, lines 23-39).

Since the apparatus is in a computer-based environment, the controller, which is interpreted as a CPU, is an inherent feature. It is apparent to one of ordinary skill in the art that the CPU communicates with and controls various components in the apparatus.

8. With respect to claim 3, Owa discloses the apparatus of claim 1, wherein said control signal generated by said controller causes an indication signal to be generated and wherein said indication signal indicates that insufficient resources are available to print said document (warning signal in col. 5, lines 8-9).

9. With respect to claim 4, Owa discloses the apparatus of claim 3 further comprising an indication signal generator, said indication signal generator being configured to receive said control signal from said controller and further being configured to generate said indication signal in response to said control signal (warning signal in col. 5, lines 8-9). Since the warning signal is generated as a result of the comparison, the warning signal generator must be present to receive the comparison result and generate the signal based on the received comparison result.

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10. With respect to claim 5, Owa discloses the apparatus of claim 1 wherein said control signal generated by said controller causes said document to be printed (col. 7, lines 12-22).

11. With respect to claim 6, Owa discloses the apparatus of claim 5 wherein said control signal generated by said controller is supplied by said controller to a print driver that responds to said control signal by sending a print command to said printer (col. 3, lines 32-35 & col. 7, lines 12-22).

12. With respect to claim 8, Owa discloses the apparatus of claim 1 wherein said apparatus is disposed in a computer (col. 3, lines 32-35).

13. With respect to claim 9, Owa discloses the apparatus of claim 1 wherein said apparatus is coupled to a computer (col. 3, lines 16-22).

14. With respect to claim 10, Owa discloses the apparatus of claim 1 wherein said printer resource comprises paper (col. 7, lines 35-39).

15. With respect to claim 13, Owa discloses a computer system comprising:
a processor (fig. 2);

an apparatus operatively coupled to said processor, said processor being configured to receive first and second values, convert said first and second values into a common unit of measure (col. 7, lines 23-39), and compare said first value to said second value and being further configured to generate a control signal based on said comparison (col. 5, lines 1-25; col. 5, lines 41-44; and col. 7, lines 35-39), said first value being associated with an amount of a first printer resource that is required to print a document (paper size, print resolution, number of pages in col. 4, lines 17-43) and

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said second value being associated with an amount of said first print resource that is available at a printer (fig. 4); and

a print driver operatively coupled to said processor and to said apparatus, said print driver being capable of receiving and responding to said control signal (col. 3, lines 32-34).

16. With respect to claim 14, Owa discloses the computer system of claim 13 wherein said print driver is operatively coupled to said printer and wherein said print driver responds to said control signal by causing said printer to print said document (col. 7, lines 12-22).

17. With respect to claim 15, Owa discloses the computer system of claim 14 wherein said print driver comprises a missile extension (network communication section 49 in fig. 8) and wherein said missile extension communicates with a ping firmware (communication control section 67 in fig. 8) disposed in said printer (col. 4, lines 13-16). It is evidently clear that the printer and the print driver support the two-way communication for the information exchange. Thus, Owa discloses the invention as specified in claim 15.

18. With respect to claim 16, Owa discloses the computer system of claim 13 wherein said print driver responds to said control signal by causing an indication signal to be generated and wherein said indication signal indicates that an insufficient amount of said first printer resource is available for printing said document (warning signal in col. 5, lines 8-9).

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19. With respect to claim 17, Owa discloses the computer system of claim 16 further comprising a monitor, wherein said indication signal generated by said print driver comprises a text message to be displayed on said monitor (warning signal in col. 5, lines 8-9 & fig. 12b). The Office interprets that the warning signal is converted to text message and that text message is displayed on the screen because system uses the screen to notify the result of the comparison according to fig. 12b).

20. With respect to claim 21, Owa discloses the computer system 13 wherein said print driver is coupled to said printer, said apparatus further being configured to cause said print driver to request that said printer transmit said second value (col. 4, lines 13-16).

21. With respect to claim 22, Owa discloses the computer system 13 wherein said print driver is coupled to said printer and wherein said second value is supplied to said apparatus by said print driver (col. 3, lines 23-40).

22. With respect to claim 28, Owa discloses a computer program product comprising a computer usable medium having computer readable program code embodied in said medium that when executed causes a computer to:

compare a first value to a second value, said first value being an amount of a printer resource required to print a document, and said second value being an amount of said printer resource available at a printer (col. 5, lines 1-25; col. 5, lines 41-44; and col. 7, lines 35-39);

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convert said first and said second values to common unit of measure before said first and second values are compared (col. 7, lines 23-39); and

generate a control signal based on said comparison (col. 5, lines 8-9).

23. With respect to claim 30, Owa discloses the computer program product of claim 28, further comprising computer readable program code embodied in said medium that when executed causes said computer to:

supply said control signal to a print driver, said control signal causing said print driver to generate a message indicating whether said printer resource available at said printer is sufficient to print said document (warning signal in col. 5, lines 8-9 & fig. 12b).

The Office interprets that the warning signal is converted to text message and that text message is displayed on the screen because system uses the screen to notify the result of the comparison.

24. With respect to claim 31, Owa discloses the computer program product of claim 28, further comprising computer readable program code embodied in said medium that when executed causes said computer to:

generate a request and supply said request to a print driver, wherein said request causes said print driver to obtain said first value from a processor and to obtain said second value from said printer (col. 4, lines 13-16).

25. With respect to claim 32, Owa discloses the computer program product of claim 28 further comprising computer readable program code embodied in said medium that when executed causes said computer to:

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supply said control signal to print driver, said control signal causing said printer driver to cause said printer to print said document (col. 3, lines 23-40).

26. With respect to claim 36, Owa teaches a method for estimating printer resources, said method comprising:

comparing a first value to a second value, said first value being an amount of a printer resource required to print a document and said second value being an amount of said printer resource available at said printer (col. 5, lines 1-25; col. 5, lines 41-44; and col. 7, lines 35-39);

converting said first and second values to a common unit of measure before said step of comparing (col. 7, lines 23-39);

causing said document to be printed if said second value is greater than said first value (col. 5, lines 1-9 & col. 7, lines 12-22); and

generating an indication signal if said first value is greater than said second value, said indication signal altering a user that said amount of said printer resource available at said printer is insufficient to print said document (warning signal in col. 5, lines 8-9).

27. With respect to claim 38, Owa teaches the method of claim 36 further comprising the steps of:

requesting said first value from a first processor (paper size, print resolution, number of pages in col. 4, lines 17-43); and

requesting said second value from said printer (col. 4, lines 13-16).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 33, 35 and 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Owa in view of Watanabe U.S. Patent No. 6,185,010.

28. With respect to claim 7, Owa discloses an apparatus for estimating printer resources, said apparatus comprising

a comparator (output destination printer selection section 11) configured and adapted to receive first and second values, said comparator further being adapted to compare (col. 5, lines 1-25; col. 5, lines 41-44; and col. 7, lines 35-39) said first value to said second value and to generate an output signal based on said comparison, wherein said first value represents a quantity of a printer resource needed to print a document (paper size, print resolution, number of pages in col. 4, lines 17-43) and further wherein said second value represents an amount of said printer resource available at a printer (fig. 4); and

a controller coupled to said comparator, said controller being configured and adapted to control said comparator and to generate a first control signal based on said output signal (col. 5, lines 8-9).

Owa further discloses that a printer driver is resided on a computer (host 1 in fig. 2) different from a printer server (col. 3, lines 31-34).

Owa, however, does not disclose expressly that a second control signal is generated for causing said printer to switch between a first mode of operation and a second mode of operation, said printer responding to a printer server while operating in said first mode and said printer responding only to a printer driver residing on a computer different from said printer server while operating in said second mode.

Watanabe, the same field of endeavor of the network printer, discloses an apparatus for generating a second control signal (S144 in fig. 14) for causing a printer to switch between a first mode of operation (network printer mode) and a second mode of operation (local printer), said printer responding to a network while operating in said first mode and said printer responding only to a printer driver residing on a computer different from said printer server while operating in said second mode (col. 6, lines 2-6).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate the mode specifying function of Watanabe into the network printer system of Owa.

The suggestion/motivation for doing so would have been to provide a user with an option of deciding the mode of the printer using a user interface display.

Therefore, it would have been obvious to combine Owa with Watanabe to obtain the invention specified in claim 7.

29. With respect to claim 33, Owa discloses a computer program product comprising a computer usable medium having computer readable program code embodied in said medium that when executed causes a computer to:

compares a first value to a second value, said first value being an amount of a printer resource required to print a document, and said second value being an amount of said printer resource available at a printer (col. 5, lines 1-25; col. 5, lines 41-44; and col. 7, lines 35-39); and

generate a control signal based on said comparison (col. 5, lines 8-9).

Owa, however, does not disclose expressly that the computer readable medium storing the program causes said printer to switch from a first mode of operation to a second mode of operation when a print job assurance feature is selected, wherein said printer responding to a printer server while operating in said first mode and said printer responding only to a printer driver residing on a computer different from said printer server while operating in said second mode.

Watanabe, the same field of endeavor of the network printer, discloses computer readable medium storing the program causes a printer to switch from a first mode of operation (network printer mode) to a second mode of operation (local printer) when a print job assurance feature is selected (S144 in fig. 14), wherein said printer responding to a network while operating in said first mode and said printer responding only to a printer driver residing on a computer different from said network while operating in said second mode (col. 6, lines 2-6).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate the mode specifying function of Watanabe into the network printer system of Owa.

The suggestion/motivation for doing so would have been to provide a user with an option of deciding the mode of the printer using a user interface display.

Therefore, it would have been obvious to combine Owa with Watanabe to obtain the invention specified in claim 33.

30. With respect to claim 35, Watanabe discloses the computer readable medium storing the program causes said printer to switch from said second mode of operation to said first mode of operation after said document has been printed by said printer (S144 in fig. 14 and col. 6, lines 2-6).

31. With respect to claims 40 and 42, arguments analogous to those presented for claim 33, are applicable.

32. With respect to claims 41 and 43, arguments analogous to those presented for claim 35, are applicable.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Owa as applied to claim 1 above, and further in view of Yamamoto U.S. Patent No. 6,584,291.

33. With respect to claims 11 and 12, Owa discloses the apparatus of claim 1, wherein said printer has a capability of measuring the remaining amount of toner and ink.

Owa, however, does not, disclose that the comparator compares remaining amount of toner or ink with the amount of ink needed to render the print job.

Yamamoto, the same field of endeavor of printing art, discloses a means for detecting the number of pixels required for the printing (col. 7, lines 41-67).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to implement the pixel count detecting means of Yamamoto into the comparing means for comparing the remaining resource amount with the needed resource amount of Owa.

The suggestion/motivation for doing so would have been to check if the toner/ink remaining amount is sufficient enough to render the requested print job.

Therefore, it would have been obvious to combine Owa with Yamamoto to obtain the invention as specified in claims 11 and 12.

Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Owa as applied to claim 17 above, and further in view of Watanabe.

34. With respect to claims 18-20, arguments analogous to those presented for claim 7, are applicable.

Claims 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Owa as applied to claim 36 above, and further in view of Watanabe.

35. With respect to claim 39, arguments analogous to those presented for claim 7, are applicable.

Conclusion

36. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

37. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **CHAN S. PARK** whose telephone number is (571) 272-7409. The examiner can normally be reached on M-F 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on (571) 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chan S. Park
Examiner
Art Unit 2622

csp
June 9, 2005

EDWARD COLES
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER